EDITORIALS BY THE LAITY.

Eye Man's Only Ethereal Sense Organ. By Sir Oliver Lodge.

SOME philosophers have reason to suppose that mind can act directly on mind without intervening mediumism, and sometimes that has been spoken of as genuine action at a distance; but in the first place no proper inception or physical model can be made of such a process, nor is it clear that space and distance have any particular meaning in the region of psychology.

The links between mind and mind may be something quite other than physical proximity, and in denying action at a distance across empty space I am not denying telepathy or other activities of a nonphysical kind. For although brain distribution is certainly physical, and is an essential communicant of mental action, whether of the sending or receiving variety, yet we know from the case of heat that a material movement can be excited in one place at the expense of corresponding movement in another without any similar kind of transmission or material connection between the two places. The thing that travels across vacuum is not heat.

In all cases where physical motion is involved, however, I would have a medium sought for; it may not be matter, but it must be something. There must be a connecting link of some kind, or the transference cannot occur. There can be no attraction across really empty space. And even when a material link exists so that the connection is obvious the explanation is not complete, for when the mechanism of attraction is understood it will be found that a body really only moves because it is pushed by something from behind.

The essential force in nature is the "vis-a-tergo." So when we have found the traces or discovered the connecting thread we still run up against the word "cohesion." Why the whole of a rod should follow when one end is pulled is a matter requiring explanation, and the only explanation that can be given involves, in some form or other, a continuous medium connecting the separated particles or atoms of matter.

When a steel is bent or distorted what is it that is really strained? Not the atoms. The atoms are only displaced. It is the connecting links that are strained, the connecting medium, the ether. Distortion of a spring is really distortion of the ether. All stress exists in the ether. Matter can only be moved. Contact does not exist between the atoms of matter as we know them. It is doubtful if a piece of matter ever touches another piece any more than a comet touches the sun when it appears to rebound from it. But the atoms are connected as the comet and the sun are connected by a continuous plenum without break or discontinuity of any kind.

Matter acts on matter only through the ether. But whether matter is a thing utterly distinct and separate from the ether, or whether it is a specifically modified portion of it, modified in such a way as to be susceptible of locomotion and yet continuous with all the rest of the ether which can be said to extend everywhere, far beyond the bounds of the modified and tangible portion, are questions demanding and, I may say, in process of receiving answers. Every such answer involves some view of the universal and possibly infinite uniform omnipresent connecting medium, the ether of space.

No ordinary matter is capable of transmitting the undulation or tremors that we call light. The speed at which they go, the kind of undulation and the facility with which they go through vacuum forbid this.

I will quote from Clerk Maxwell: "The vast interplanetary and interstellar regions will no longer be regarded as waste places in the universe which the Creator has not seen fit to fill with the symbols of the manifold order of his kingdom. We shall find them to be already full of this wonderful medium, so full that no human power can remove it from the smallest portion of space, or produce the slightest flaw in its infinite continuity. It extends unbroken from star to star, and when a molecule of hydrogen vibrates in the Dogstar the medium receives the impulses and after carrying them in its immense bosom for several years delivers them in due course, regular order, and full tale into the spectroscope."

This will suffice to emphasize the fact that the eye is an ethereal sense organ, the only one we possess, the only mode by which the ether is enabled to appeal to us, and that the detection of tremors in this medium, the perception of the direction in which they go, and some inference as to the quality of the object which has emitted them cover all that we mean by "sight" and "seeing."

Efficiency of Industrial Education. By G. Edward Fuller.

IN problems of industrialism efficiency is the solution; for 50 per cent efficiency usually means a loss when 100 per cent efficiency means a good profit.

Recent utterances of a half dozen or more college presidents on the subject of business training for college men, together with reports of commissions on industrial education, and the Davis bill before congress are confessions of minimum percentages of efficiency in our educational methods.

"As the twig is bent so will the tree incline," and too many boys go wrong because during the school period they get wabbly with "culture" they can't afford. Industry becomes hateful, to get rich quick an obsession, and boy efficiency is reduced by fickle habits that make the twisted man.

When you ask a policeman in any part of the city about some recent local petty crime his usual reply is, "O, young fellows out of work," as if that almost went without saying.

What our industrial development and our social evolution both require is more of the spirit of occupation for occupation's sake, and that is a sentiment which can be fostered by object lessons and well timed elucidations directed toward the productive and dependable, but connected with the regular school course.

Culture, as we haughtily term it, although perfectly lovely for idleness, is too low in self-supporting efficiency for the conditions most of us are called upon to face in big cities, and lacks the moral force of useful employment—continuous occupation.

There is no need to wait until a new generation of special teachers shall be trained to do this additional work which the situation demands, for instructors are here now and can be found among our business men and in the factories, ready to serve in practical ways.

In Chicago's lively style of doing things, a beginning at the bottom, in the primary grades of our public schools, can be made at once without interference with any established curriculum.

It is one of the opportunities of the times to introduce industrial instruction in an effective, entertaining manner at low rate of expense during the common school course, and perhaps even the 5 cent theater craze can be utilized. We dramatize crime, even in our courts. Why not dramatize industrialism in our schooling?

A method in the traveling library manner can be organized quickly and working demonstrators secured from the business houses and factories, while periodical office inspection and factory visiting could be made a part of the whole in such a way as to make the boy fall in love with the system. It might be carried through every grade and even into the colleges and universities, as well as joined to consular and diplomatic preparatory studies. This kind of familiarity would breed respect on both sides and all around.

Museum, exposition, and commercial demonstration lines of work have shown the value of object lessons and applied methods for uplifting public taste and conveying information, but they all lack the continuity essential in complete educative science; and the ratio of efficiency is low because discipline is lacking.

Movable and exchangeable scientific exhibits, models, commercial samples, classified with picture catalogues of apparatus and operative machinery, together with current statistics, including market reports and quotations, would give basic facts for students in industrialism. This would be less difficult than the assembling of a world's fair, while the benefit would be permanent instead of transitory.

Temporary locations could be secured at first for talks, and one class of commodities after another shown and leaflets or bulletins distributed—even instruction by correspondence could be carried on.

A beginning like this may be made with specimens of commercial products of the greatest current interest, and a spirit of rivalry engendered between different classes of manufacturers that would create a wholesome excitement for the pupils, and perhaps help to clarify even tariff questions in time.

Along with detailed knowledge of the natural history and manufacturing possibilities of the goods there would come that elementary curiosity which is the foundation of vocational pride.

Look back to 1871 and judge what the helpless little ones now entering school will have to face before their children come into their own—it's serious thinking, for the "boy problem" indeed awaits solution.

Selective competition, with fellowship diplomas, which could take the form of indorsements and recommendations for specific positions in the pupils' choice of trade, would be strong incentives, while the cultivated habits of purpose would tend to promote contentedness within the average ranks of industrial and commercial life where most of us belong.

We can't make farmers of city boys—the professions and the offices are overfull—but any manufacturer will tell the inquiring educator that trained young men with working ideas are wanted and welcome in the factories, the strongholds of modern industrialism, where the ratio of manhood efficiency is becoming high enough to take on a dignity of its own.

Civilization Marks Doom of Stimulants. By Ada May Krecker.

DR. HAUSEMANN of Berlin is one of the scientific dignitaries. And he has found four orders of geniuses. Lowest in rank he places those whose inspirations flow from drugs, narcotics, and drink. They have the most primitive temper, both mental and physical. Their mind and body stuff are comparatively coarse and gross. Whatever their genius it lags behind the contemporary march as a souvenir and survival of cruder ages. It belongs to the sluggish primitive races whose inert energies are roused into activity only by the roughest excitants.

It is recorded that the rude natives of uncivilized lands beg their overseers to lash them to whip away the physical torpor which prevents them from doing even their rough brute tasks. But slave drivers with whips could do little with a twentieth century poet wooing his muse or an astronomer calculating the distance from Arcturus to the sun. These require a different stimulus. As men refine the grosser excitants make no appeal to them and are unable to waken the forces needed for their civilized work. Their dainty systems use, of course, totally different faculties from the savage organism and respond to entirely different stimuli. They have entirely different habits and perform totally dissimilar work.

President Eliot of Harvard has been all his life what is sometimes called a moderate drinker, but now he is confessing that "the recent progress of medical science, largely accomplished through animal experimentation, has satisfied me that even the moderate use of alcohol is objectionable, that the habitual use of alcohol in any form is lowering to the intellectual and nervous power. Now, if a man be leading a purely animal or muscular life, I will say he can perhaps feel no evil effect from the drug, but if he is leading an intellectual life, if he is engaged in an action which interests him keenly, stirs him, impels him to the use of his mind, then he will inevitably feel the slowing effect, the deteriorating effect of this drug."

But even in manual work President Eliot finds men changing their ideas and habits. It was thought that a sailor in the merchant marine or in the navy had to be braced by his daily grog. But grog has been absolutely abolished in our navy and is no longer served in well conducted ships of merchant marine, "and the result is a demonstration that rough, hard life was not really helped by alcohol but hindered. No captain of an ocean liner ever supports himself now against the terrible exposures of the bridge by means of alcohol."

But there needs no argument to press home the proof of a decline in the use of liquors. It is perfectly evident throughout the country. And in narcotics a similar change of heart is coming about. Around a particularly handsome Chicago dinner table several weeks ago the host passed a box of remarkably fragrant cigars only to find it returned to him full to the brim, with not a cigar out of its place. "Send it back to the store!" laughed a guest. John J. Hayes, winner of the Marathon race in London, confesses in a magazine that "No long distance runner can smoke either cigars or cigarets and run. One thing is essential, abstinence from tobacco in any form. I suggest running as a certain cure for the tobacco habit to any one who wishes to break himself of it."

Go where we will among the savages and we find drugs powerful and plentiful employed for setting into action men's powers. It is only among the finest types of the most advanced races that we see them discarded in favor of subtler stimuli. Prof. James, the Harvard psychologist, urges the superior claims, as excitants, of morning air and sunlight and fine skies and mountain walks and dewy flowers and great thoughts and sweet aspirations above the frothy hopes of the foaming glass. They are the natural stimulants of refined organisms.

These need no other. No, not even coffee and tea. An Englishman, E. Baron Russel by name, has been making predictions for the year 2000 A. D., and he has it that by that time the human system will have so refined that tea and coffee will be placed in the same category that alcoholic stimulants occupy nowadays. The prohibitionists of that remote hour will be campaigning against tea and coffee and teetotalers will sign their pledges in favor of coffeeless breakfasts and afternoon teas without "the cup that cheers but does not inebriate."

Fostering Talents Often Impossible. By John A. Howland.

SOME time ago an acquaintance of mine, who finds pastime in looking a little into sociological conditions, announced it as his opinion that educational institutions, for the masses at least, do not go far enough in the work of equipping the young man for his occupation in the world.

"Why should not the schools, colleges, and universities—perhaps even the state itself—establish a commission which should examine the student body on practical lines and give to the individual student its best opinion as to the line of work for which he is best fitted? Thousands of young men fail, not because of incompetent bodies and brains, but because of misdirected ambitions. They are the round pegs in the square holes. Why not an advisory body which would prevent the mistake?"

Probably a thousand reasons could be advanced to show how and why such a commission inevitably would fail of such a purpose. Under an absolute monarchy, where government asserted absolute ownership of its citizens, the idea might be carried out—and fail. But under democratic government, where the individual citizen is slow to yield his individuality in any degree, even to the public good, such a commission might sit for ten years without having an applicant upon which to pass its constituted judgment; and after that lone applicant had received this judgment, the chances are that between himself and advisory friends the findings would be disregarded.

A fact too little regarded today is that our complex civilization is such as to discourage talent and genius as it never before was discouraged.

When a young man has had four years of college work, he is eligible for matriculation in a medical school of standing. After which, according to estimates, it will cost him $1,000 to $1,500 to acquire his medical degree.

Do you see where the scheme of my friend would fall in this instance? Suppose that in the grammar grades of a public school some boy were discovered who showed unmistakable evidences of genius in surgery. What would it avail that boy if he were one of four or five children in the family of a father who drew a salary of $20 a week? There are a hundred chances to one that instead of ever becoming a noted surgeon, that boy will gravitate from the eighth grade in grammar school to the position of driver for a grocer's wagon.

The point is overlooked by my friend that at the present time there are commissions in endless chains which are canvassing the fitness of young men for place in the world. The young man cannot become a cadet at Annapolis or at West Point if he isn't tall enough and of age and weight prescribed. Perhaps the civil service examinations, city, state, and national, are representative of the greatest single force passing in judgment upon the fitness of the young man aspiring to place in governmental affairs. After which, in thousands of established businesses, there are thousands of such figurative commissions which are passing upon the qualifications of applicants, accepting and rejecting, as they will, according to experience and knowledge of men.

You may say that all these inquisitions are made after the young man has prepared for his work. So they are, but the fact is a condition, and it is a question if theory ever overturns it.

If the young man of marked genius, through force of circumstances, must become driver of a grocery wagon, it is as certain that thousands of sons of well to do parents will become fitted, through costly preparation, for positions which they are not competent to fill, according to a wise commission's judgment. If these sons have not the ambition and the initiative for such choice, their parents and friends will bring the necessary influence to bear on this preparation. Occasionally, too, this social influence will be sufficient to hold the mediocre one in his position for years—perhaps for life.

Can it be denied that this is a discouraging condition?

Several years ago, in one of the largest cities of the country, two surgeons of prominence followed their professions contemporaneously. Both men are dead now, and the illustration and comparison must be less "odious" because of this fact. One of these men was of foreign birth, who had fought his way at every step to that knowledge and proficiency which exacted recognition for him wherever the science of surgery was appreciated. The other, child of fortune, was graduated to his work under the influence of family pressure which could command position and influence for him the moment he got his diploma. The one man gained his recognition through sterling worth; the other through social prominence.

One day a prominent social figure in the city received a fall and a compound fracture of the skull. It was a condition which under any circumstances called for one specific, first surgical action. But when a few days later the other surgeon was called in consultation as a last resort in saving the life of the patient—that first and only precaution had not been taken!

Isn't it discouraging, however, when in that city the name of the man called into consultation promises to be forgotten long before the name of the society incompetent, who, because of crass ignorance of his profession, had to call the genius into consultation?

Now and then in the present, as probably always in the future, that strong soul rises up who

"Breaks his birth's invidious bar,
And grasps the skirts of happy chance,
And breasts the blows of circumstance,
And grapples with his evil star."

But there are circumstances that cannot be breasted, preach it as you will. There are skirts of chance that are not to be grasped by human hands. If in the time of Gray,

"Some mute, inglorious Milton here may rest,
Some Cromwell, guiltless of his country's blood,"

what of the epitaphs that every day may be written in the present complex, competitive life of the twentieth century?

Follow your bent if you can! Take no one—not ten—negatives for final answer! But if, in the face of the inevitable, you are forced to accept the next best thing, honest earnestness must bring its compensations.

Don't Marry Out of Your Own Plane. By Helen Oldfield.

MEN, still more women, who marry out of their own plane of life take heavy risks. Happiness in married life first and foremost depends upon compatibility of temper, not a natural facility of disposition which readily adapts itself to the moods and tenses of others, but the entire and cordial agreement which is based upon community of tastes and of interests; which implies similarity of ideas, common sympathies, and equal standards of right and wrong.

Husband and wife may never exchange an angry word or look, and yet be so alien in temper, so opposite in sentiment, as never to agree. The intimate union of heart and soul without which marriage is a sham and mockery, and often becomes a curse, can never be realized where this compatibility of temper does not exist.

All which makes for or against it chiefly, if not altogether, is determined by birth and environment. Temperament counts for much, and temperament, modern scientists tell us, largely is a matter of heredity. Training is all important; there is an old and homely saying that "what is bred in the bone will show itself in the flesh."

A fish out of water, a land bird at sea, is no more hopelessly out of its element than is the average man or woman who suddenly, without preparation, almost without warning, is transferred from one plane of life to another.

In the eye of the law one man or woman may be as good as another—that is to say, in the sense that their legal rights are the same. But even in courts of justice there are sharp distinctions as to character and social standing; while all the world over silk is accounted of more value than cotton, sealskin than coney. "One vessel is made to dishonor, and another to honor," and no edict of congress or parliament can alter the stubborn fact. Tennyson may say:

"Kind hearts are more than coronets,
And simple faith than Norman blood,"

Burns may sing:

"The rank is but the guinea stamp,
The man's the gowd for a' that,"

yet a coronet backed by a long pedigree is impressive, not to say dazzling to most people, while gold, however pure, will not pass as current coin of the realm unless it has duly been stamped as such. The risks which counterfeiters do not hesitate to incur bear strong testimony to the value of the "guinea stamp."

Physiologists no less than psychologists assure us that generations of culture and refinement have infinite effect upon nerves and brain. The oft quoted lines,

"And the poor beetle that we tread upon
In corporal sufferance finds a pang as great
As when a giant dies,"

are a bit of arrant poetic fiction. Entomologists say that the beetle is almost insensible. On the other hand the giant's capacity for suffering is in inverse ratio to his bodily strength, and power of physical endurance, a matter of more or less seasitive organization. It conclusively has been proved that the laborer, roughly nurtured and hardened by contact with the seamy side of life, is insensible to a degree of pain which would be intense torture to another man who had been lapped in luxury from birth.

"There's nothing either good or bad but thinking makes it so." It all depends upon the point of view, which in turn depends upon the standards fixed by education and association.

The law of life is that people must be congenial in order happily to dwell together. For most of us the definition of an agreeable person is one who agrees with us, and the most ardent love cannot long endure the constant irritation of tricks and manners wholly in opposition to one's own. The fable of the cat which when changed into a beautiful woman left her husband's arms to chase mice has its evident moral, a salutary one for all who have sense to understand.

A gentleman cannot marry his cook or housemaid, nor can a girl elope with her father's man servant, and hope, much less expect, that their friends and associates will receive the erratically chosen spouses into even the outer circle of their exclusive set. It is nonsense to say that love can level all distinctions. It may overleap them, but seldom, if ever, does it fail to find barriers afterwards to be surmounted.

Men who marry beneath them often have an uncomfortable time after the knot is tied. However high may be their own social status they cannot compel society to approve the match. True, if they are plucky and persistent, and the wives have the qualities necessary for social success, the pair usually win in the long run, but the struggle is apt to be a long and a hard one, and society never forgets, though it may consent to ignore the pit from which the interloper was digged.

When a woman takes a husband from a lower social plane than her own the case is by far more difficult. When a man marries he can, if he so elects, entirely cut his wife off from past associations, and separate her from her own people; on the contrary, a woman, so to speak, marries her husband's family, and thenceforth must cast her lot with them, unless the man sees fit to cut himself adrift. If the man successfully can rise, well and good; if the woman can descend with an air of complete contentment, no great harm may be done. But the risk is great, and few are the chances in her favor.